

Proposal Title:

Development tools for robotics programming

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Summary:

Hatchery is a tool for building ROS applications based on the CLion IDE. Originally developed as an educational aide for robotics programming, it now offers broad support for creating ROS projects in various languages, integration with common ROS plugins, assistance for running and debugging ROS applications, and other helpful development features. In this session, we will demonstrate how to build a simple ROS application from scratch using Hatchery and explore some of the features it provides. Attendees will also get a taste for how modern developer tools are implemented and learn some techniques for parsing and compiling domain-specific languages.

Description:

This session will demonstrate a new IDE for ROS development. Primarily it consists of a rehearsed live demo illustrating some of the features which the IDE supports, as well as brief commentary about its implementation. Topics which will be covered in this tutorial:

1. Creating a new ROS project in Hatchery
2. Detecting and selecting a ROS distro
3. Custom language support for ROS interface files
4. Auto-completion and refactoring support
5. Running and debugging a ROS application

If time permits, attendees will also learn about parser-generators such as Xtext, Grammar-Kit and various tools for developing custom language support in an IDE of their own choice. Please refer to this URL for further details about the project: <https://github.com/duckietown/hatchery/>